NON-PROVISIONAL

APPLICATION

of

MICHAEL MARRA

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on

APPARATUS FOR PROVIDING AURAL INDICATIONS OF THE FLIGHT OF A BALL WHEN THE BALL DISPOSED ON THE T-BALL STAND IS HIT BY A BATTER

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Attorneys
FULWIDER PATTON LEE & UTECHT, LLP
Howard Hughes Center
6060 Center Drive, Tenth Floor
Los Angeles, CA 90045

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[0001] This is a non-provisional corresponding to provisional application 60/442,151 filed in the USPTO on or about January 23, 2003.

[0002] This invention relates to T-ball apparatus. More particularly, this invention relates to a T-all apparatus which broadcasts the flight path and flight characteristics of a ball which is disposed on the T-ball apparatus and which is hit by a batter. The batter may be a young child.

BACKGROUND OF A PREFERRED EMBODIMENT OF THE INVENTION

[0003] Baseball has been designated for years in the United States as the national pastime. Actually, baseball constitutes the national pastime in a number of countries in the world, including Japan and several countries in Central America. The fundamentals of baseball are in two (2) categories–hitting and catching. Hitting is perhaps more difficult than catching.

[0004] Leagues have been organized to foster skills in hitting and catching. For example, leagues of teams have been organized in localities all over the United State for youngsters in the age group of approximately six (6) to eight (8) to develop their skills in hitting and catching. These leagues develop the player's skills in hitting by providing a T-ball apparatus in which a ball is disposed on a support and in which the player hits the ball while the ball is on the support.

[0005] The problem with T-ball leagues is that the players practice only once or twice a week. It would be desirable to provide the young players with increased opportunities to practice hitting. Furthermore, it would be desirable to provide the young players with opportunities to practice on their own. In providing the young players with the opportunity to practice, it would be desirable that the young players be able to hit the ball on the T without thereafter having to retrieve the ball at some distance from the T. It would be further desirable that the young players receive aural encouragement every time that the young players hit the ball. It would be further desirable for the batter to hear the flight path characteristics of every ball that the batter hits.

BRIEF DESCRIPTION OF A PREFERRED EMBODIMENT OF THE INVENTION

[0006] This invention provides a T-ball apparatus which fulfills all of the criteria specified above. A weighted base fixedly supports a stanchion. The stanchion supports a slide fixed

vertically at any desired height in the stanchion by a locking member movable into a track in the slide. An aural unit disposed on the slide has an externally disposed switch which is operable to prepare the aural unit for operation. A tube extending upwardly from the aural unit has a cup for holding a ball. A string extending from the ball to an annular opening in the aural unit engages a resiliently disposed conductive chain. Conductors are disposed at annularly spaced positions in the opening. When the ball or the cup is hit, the conductive chain engages one of the conductors dependent upon the direction of the ball's flight. This causes the aural unit to broadcast the ball's flight dependent upon the positioning of the activated conductor in the opening.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] In the drawings:

[0008] Figure 1 is a schematic perspective view of a batter positioned to hit a ball on a T-ball mechanism constituting a preferred embodiment of the invention;

[0009] Figure 2 is an enlarged fragmentary elevational view of an aural unit in the T-ball mechanism for broadcasting the flight path and flight characteristics of a ball hit by the batter when the ball is disposed on the T-ball mechanism;

[00010] Figure 3 is an enlarged fragmentary sectional view in elevation of members included in the T-ball mechanism for adjusting the height of the T-ball mechanism to adjust the distance of the ball from the ground in accordance with the height of the batter and the batting stroke of the batter;

[00011] Figure 4 is an enlarged fragmentary sectional view in elevation of a base and a stanchion removably coupled to the base and extending upwardly from the base;

[00012] Figure 5 is an exploded perspective view of the components inside the aural unit shown in Figure 2;

[00013] Figure 6 is a diagram schematically showing the circuitry for providing the broadcasting of the flight path and flight characteristics of the ball when the ball is hit by the batter;

[00014] Figure 7 is a schematic circuit diagram schematically showing the operation of the aural unit in orally describing the flight path and flight characteristics of the ball when the ball on the T-ball mechanism is hit by the batter;

[00015] Figure 8 is a schematic circuit diagram schematically illustrating the operation of the aural unit in broadcasting the flight path of the ball in the English language or another language;

[00016] Figure 9 is a schematic circuit diagram schematically illustrating the prevention of any oral indication by the aural unit when the ball is disposed on the T-ball mechanism; and

[00017] Figure 10 is a circuit diagram schematically illustrating electrical circuitry for orally indicating the flight path and flight characteristics of the ball when the ball is hit from the T-ball mechanism by the batter.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT OF THE INVENTION

[00018] A preferred embodiment of the T-ball apparatus is generally indicated at 10 in Figure 1. The apparatus 10 includes a hollow base 12 (Fig. 4) having a removable plug 14 (Figure 1) on its upper surface. When the plug 14 is removed from the base 12, the base can be filled with a suitable material such as water or sand to provide a firm support for the apparatus 10 on a support surface. The base includes a female detent 15 (Figure 4) which supports a male detent 16 in a hollow stanchion 20.

[00019] The stanchion 20 extends upwardly from the base 12. The stanchion 20 has a locking member 22 (Fig. 3) which is pivotable between first and second positions. In the first position of the locking member 22, a slide 24 (Fig. 3) having a track 26 is able to slide freely in a vertical direction in the stanchion 20. In a second position, the locking member 22 moves a resilient patch 28 on the stanchion 20 against the slide 24 to retain the slide at a fixed position vertically relative to the stanchion. In this way, the height of the apparatus 10 can be adjusted to accommodate the height and batting characteristics of the batter.

[00020] An aural unit (Figs. 1, 2 and 5) generally indicated at 30 is disposed on the slide 24 at the upper end of the slide. The aural unit 30 includes a speaker 32 (Figure 5) inside the unit and a manually operable switch 34 on the exterior of the unit. The aural unit 30 also includes an

annular opening 36 (Figs. 1, 2 and 6). An electrically conductive chain 38 extends through the opening 30. The chain 38 may be connected to a positive terminal of an energy source such as battery (or batteries) 40 having its negative terminal connected to a reference potential such as ground. The chain is constrained by a spring 39a and 39b.

[00021] Terminals 42a, 42b....42n (Figs. 6 and 7) are disposed at annularly spaced positions around the periphery of the annular opening 36. Each of the terminals 42a, 42b....42n is connected to an individual one of a plurality of recordings 43a...43n when the chain 38 contacts the terminal. The recording 43a...43n are included at different positions in a tape but are shown separately for purpose of facilitating an understanding of the invention.

[00022] A contact 44 (Fig. 5) is provided in the aural unit 30. It forms a switch with an electrically conductive arm 45 pivotable on a pin 46. This switch is connected across the tape providing the messages 43a . . .43n and is schematically illustrated at 46a in Fig. 9. The arm 45 is normally disposed in engagement with the contact 44 to form the switch 46 shorting the tape so that messages from the tape cannot be broadcast. The switch 46 is also illustratively shown as being disposed across the messages 43a and 43f in Figure 6.

[00023] The arm 45 is pivotable by the chain 38 when the chain is activated. When pivoted by the chain 38, the arm 45 engages a contact 47 to close a switch defined by the arm and the contact. This completes a circuit (Fig. 9) which includes the chain 38, the battery 40, an individual one of the terminals 42a. . . 42n and an individual one of the messages 43a. . . 43n associated with the terminal.

[00024] A hollow tubing 48 (Fig. 1) extends upwardly from the top of the aural unit 30. The tubing 48 has a cup 49 at its upper end for retaining a ball 50. The ball 50 may be a soft hollow ball which will not produce any harm even if it should strike a player. A string 51 is attached at one end to the ball and at the other end to the chain 38.

[00025] Each of the messages 43a. . . 43n is individual. Each of the messages 43a. . . 43n becomes activated when the chain 38 is activated to engage the associated one of the terminals 42a . . .42n. For example, the message 43a becomes activated when the ball travels upwardly and to the right. The message may accordingly indicate that the batter has hit a fly ball to right

field. In like manner, the message 43f may become activated when the chain 38 contacts the terminal 42f. The message 43f may accordingly indicate that the batter has hit a ground ball to right field.

[00026] As will be seen, the upper quadrants of the terminals 42a. . .42n indicate a fly ball and the lower quadrants of the terminals 42a. . . 42n indicate a ground ball. The right quadrants of the terminals 42a. . . 42n indicate balls hit toward right field and the left quadrants of the terminals indicate balls hit toward left field. All of the messages 48a. ..48n are intended to offer encouragement to the batter.

[00027] The manually operable switch 34 on the aural unit 32 has two (2) positions. In one position, the switch 34 provides for a message 52 indicating a practice mode. For example, the message 52 may constitute an announcement by a broadcaster of the words "Batter Up." Every time that the batter hits the ball 48 in this mode, the broadcaster may indicate the flight path and flight characteristics of the ball and, after a pause, may pronounce the words "Batter Up". In the other position, the switch 34 provides for a message 54 indicating a game mode. In this mode, the message may constitute a musical introduction as with fan fares and then an announcement of a team designation followed by a pronouncement of the words "Batter Up."

[00028] The discussion above has proceeded on the basis that all of the messages are in the English language. All of the messages may be in a second language such as the Spanish language. This may be provided by a switch 56 (Fig. 8) which may be on the back side of the T-ball apparatus. In one position of the switch 56, the aural pronouncements may be in the English language. In the other position of the switch 56, the messages may be in the Spanish language.

[00029] Although this invention has been disclosed and illustrated with reference to particular preferred embodiments, the principles involved are susceptible for use in numerous other

[00030] embodiments which will be apparent to persons of ordinary skill in the art. The invention is, therefore, to be limited only as indicated by the scope of the appended claims.